

U.S. Patent Appl. S/N 09/844,051

Attorney Docket No. 2001B035

AMENDED CLAIMS

1-3 (Cancelled)

4. (Previously Presented) A process for the selective production of meta-diisopropylbenzene and para-diisopropylbenzene, said process comprising the step of contacting a feed containing cumene under disproportionation conditions with a catalyst comprising a molecular sieve having pores with a minimum cross-sectional dimension of at least 6 Angstrom to produce a disproportionation effluent containing benzene and a mixture of diisopropylbenzene isomers, wherein the feed is substantially free of benzene and the catalyst is essentially free of sulfided hydrogenation metal.

5. (Original) The process of claim 4, wherein said molecular sieve has pores with cross-sectional dimensions of between 6 and 7 Angstrom.

6. (Original) The process of claim 4, wherein said molecular sieve is selected from the group consisting of mordenite, zeolite beta, zeolite Y and MCM-68.

7. (Original) The process of claim 4 wherein said molecular sieve is mordenite.

8. (Original) The process of claim 7, wherein said molecular sieve is TEA-mordenite having an average crystal size less than 0.5 micron.

9. (Original) The process of claim 4, wherein said disproportionation conditions include a temperature of about 100 to about 300°C, a pressure of about 20 to about 5000 psig, a WHSV of about 0.01 to about 100 and a hydrogen to hydrocarbon molar ratio of 0 (no hydrogen added) to about 50.

10. (Original) The process of claim 4, wherein said disproportionation conditions include a temperature of about 140 to about 220°C, a pressure of about 20 to about 500 psig, a WHSV of about 0.01 to about 10 and a hydrogen to hydrocarbon molar ratio of about 0 to about 5.

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11. (Original) The process of claim 4, and comprising the initial steps of alkylating benzene with propylene to produce an alkylation effluent comprising cumene and then using at least part of said alkylation effluent as the feed to said contacting step.
12. (Original) The process of claim 11, wherein at least part of the benzene produced by said contacting step is recycled to the alkylating step.
13. (Original) The process of claim 4, wherein part of the diisopropylbenzene in the disproportionation effluent is recycled to the contacting step.
14. (Previously Presented) The process of claim 4, wherein said effluent, prior to any separation step, contains less than 1 wt% of n-propylbenzene, less than 5 wt% of triisopropylbenzenes, and less than 5 wt% of reaction products other than benzene and diisopropylbenzenes; and said effluent, prior to any separation step, contains less than 1% of ortho-diisopropylbenzene by weight of the total diisopropylbenzene content of said effluent.
15. (Previously Presented) The process of claim 14, wherein said effluent, prior to any separation step, has a meta-diisopropylbenzene to ortho-diisopropylbenzene ratio in excess of 50.
16. (Previously Presented) The process of claim 14, wherein said effluent, prior to any separation step, has a meta-diisopropylbenzene to ortho-diisopropylbenzene ratio in excess of 100.
17. (New) A process for the selective production of meta-diisopropylbenzene and para-diisopropylbenzene, said process comprising the step of contacting a feed containing cumene under disproportionation conditions with a catalyst comprising a molecular sieve having pores with a minimum cross-sectional dimension of at least 6 Angstrom to produce a disproportionation effluent containing benzene and a mixture of diisopropylbenzene isomers, wherein the feed is substantially free of benzene and the catalyst is substantially free of sulfided hydrogenation metal.